

AMENDMENT TO THE CLAIMS:

This listing of claims will replace prior versions and listings of claims in the application:

Listing of claims:

1-13. (cancelled).

14. (Currently amended) A method for selecting a compound ~~which reduces that~~ modulates an activity of an alpha subunit of an SCN3A sodium channel comprising:

- (a) contacting a composition comprising the alpha subunit of said ~~[[a]]~~ SCN3A sodium ion channel protein as set forth in SEQ ID NO:67 having amino acid residue 43 being deleted or amino acid residue 1035 being an isoleucine instead of a valine with ~~[[a]]~~ at least one test compound;
- (b) assaying the activity of the alpha subunit of the sodium ion channel in the presence of the test compound;
- (c) comparing the activity of the alpha subunit of the sodium ion channel in the absence of the at least one said test compound;
- (d) selecting a compound ~~which reduces that~~ modulates the activity of the alpha subunit of the sodium ion channel as compared to the activity in the absence of the at least one sodium ion channel ~~in the absence of the test compound;~~

wherein said SCN3A protein is selected from the group consisting of

- (i) — an amino acid sequence set forth in SEQ ID NO:67; and
- (ii) — a SCN3A protein expressed by a SCN3A nucleic acid sequence having at least 95% identity to the nucleic acid sequence as set forth in SEQ ID NO:65.

Claims 15-34 (cancelled).

35. (currently amended) The method of claim 14, wherein the method is used for selecting a compound capable of reducing voltage-gated ion channel activity of a human SCN3A protein associated with generalized epilepsy with febrile seizures.
36. (currently amended) The method of claim 14, wherein the at least one test compound is a library of test compounds.
37. (currently amended) The method of claim 14, wherein the alpha subunit of said [[a]] SCN3A sodium ion channel nucleic acid encoding the SCN3A-protein is comprised encoded by [[in]] an expression vector.
38. (previously presented) The method of claim 37, wherein the expression vector is comprised in a cell.
39. (previously presented) The method of claim 14, wherein the assaying is performed with a whole cell.
40. (currently amended) The method of claim 14, wherein the sodium ion channel activity is:
- (i) voltage dependence activation;
 - (ii) voltage dependence of steady state level of inactivation;
 - (iii) time course of inactivation;
 - (iv) the number or fraction of channels available for opening;
 - (v) change in current;
 - (vi) flux of ions through the channel;
 - (vii) phosphorylation of channel;
 - (viii) binding of molecules to the channel; or
 - (ix) induction of a second cellular messenger.

41. (previously presented) The method of claim 40, wherein the flux of ions through the channel is assessed by:
- (i) fluorescence resonance energy transfer (FRET)-based voltage sensor assay;
 - (ii) dibasic dyes;
 - (iii) ^{14}C -guanidine;
 - (iv) two electrode voltage clamp; or
 - (v) patch-clamp.
42. (previously presented) The method of claim 40, wherein the binding of molecules through the channel is assessed by surface plasmon resonance.
43. (previously presented) The method of claim 14, wherein the method is used for selecting a compound which reduces the hyperexcitability state of the [[a]] SCN3A ion channel.
- 44.-47. (cancelled)